



# Living Green & Saving Energy

# Did you know...

☀ The intensity and duration of hurricanes and tropical storms have **increased 100%** since the mid-1970's

(source: 2005 MIT study)

# Did you know...

☼ By 2030, there will be **no glaciers** left in Glacier National Park

Source: U.S. Geological Survey

# Did you know...

- ✿ Of the 200 Billion pounds of plastic used each year, about 10% end up in the ocean. There is a patch of floating plastic in the North Pacific Ocean.

### Location

The garbage patch is located in the North Pacific Gyre, one of five major swirling vortices of currents in the world's oceans.



### Size

The borders of the plastic garbage patch are difficult to determine because much of the plastic is in pieces too small to be seen by satellites or planes.

Estimates of the size range from about 250,000 square miles (an area roughly the size of Texas) to 6 million square miles, which would mean that the garbage patch covers about 10 percent of the entire Pacific Ocean.

# Did you know...

- ☀ More than **15%** of the world's plant and animal species **will die** off by 2050 because of the impacts of global warming

# Did you know...

☀ **America** is the top global warming **polluter** in the world

# Pop quiz!

What percentage of used paper products were recycled in the United States in 2005?

**50 percent**  
**(42,000,000,000 tons)**



# Pop quiz!

How many plastic bags go un-  
recycled

each year in the United States?

**Approx. 90 billion**

# Pop quiz!

**How many liters of water are used  
in the average 10-minute shower?**

**131 liters**

# Definitions

☀ **Green** – a term widely used to describe buildings, products designed and constructed with minimal negative impact on the environment

# Definitions

☀ **Global Warming** – an increase in the global mean temperature of the Earth that is a result of increased emissions of greenhouse gases that are trapped within the earth's atmosphere

# Definitions

☀ **Carbon Dioxide (CO<sub>2</sub>)** – a colorless, odorless gas that naturally exists in the earth's atmosphere (the major source of manmade CO<sub>2</sub> emissions is from the combustion of fossil fuels)

☀ **Carbon Footprint** – a measure of the impact human activities have on the environment in terms of the amount of greenhouse gasses produced, measured in units of carbon dioxide

# Definitions

☀ **Fair Trade** - an organized social movement and market-based approach to empowering developing country producers and promoting sustainability (advocates the payment of a fair price as well as social and environmental standard)

# Definitions

☀ **Sustainability** – refers to the concept that new development & processes must meet the needs of the present without compromising those of the future

# Definitions

☀ **Recycling** – a series of processes that include collection, separation, and processing by which products and raw materials are recovered and reused in lieu of disposal as solid or liquid wastes



# Definitions

## ☀ **Ethical Consumerism**

loosely defined as the practice of purchasing products and services that actively seek to minimize social and/or environmental damage, and the avoidance of products deemed to have a negative impact on society or the environment.



**TOILET**  
6 gallons/flush



**LOW-FLOW TOILET**  
1.3 gallons/flush



**SHOWER** 10 MINUTES  
3.8 gallons/minute



**LOW-FLOW SHOWER** 10 MINUTES  
2.3 gallons/minute



**FAUCET** 1 MINUTE  
5 gallons/minute



**LOW-FLOW FAUCET** 1 MINUTE  
1.5 gallons/minute

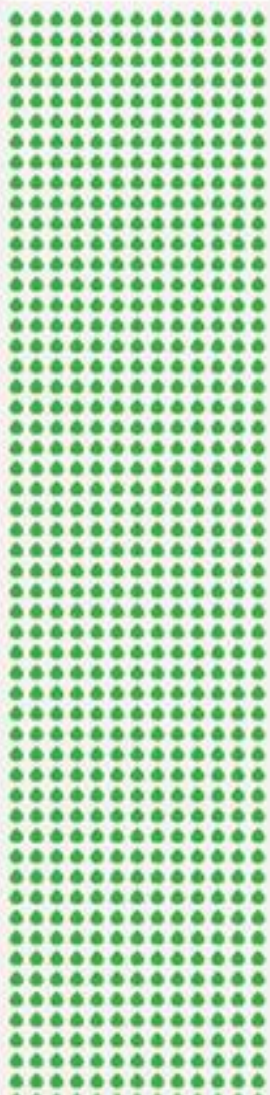


TOTAL: 49 GALLONS

TOTAL: 25.8 GALLONS

AMOUNT SAVED: 23.2 GALLONS

**BEEF** ONE POUND  
1,500 gallons



**WINE** ONE GLASS  
31 gallons



**BREAD** TWO SLICES  
11 gallons/slice

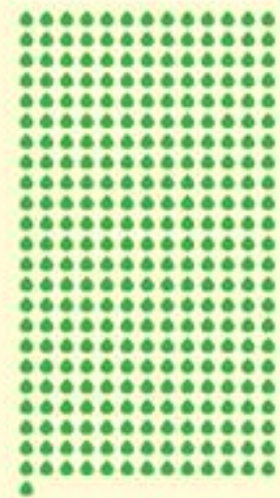


**DISH WASHING**  
BY HAND  
20 gallons



TOTAL: 1573 GALLONS

**CHICKEN** ONE POUND  
287 gallons



**BEER** ONE PINT  
20 gallons



**BAKED POTATO**  
7 gallons



**DISH WASHING**  
W/ ENERGY STAR DISH WASHER  
4 gallons



TOTAL: 318 GALLONS

AMOUNT SAVED: 1,255 GALLONS

# Benefits of living green

☀ **Environmental**

☀ **Financial**

☀ **Health**

☀ **Personal**

☀ **Community**

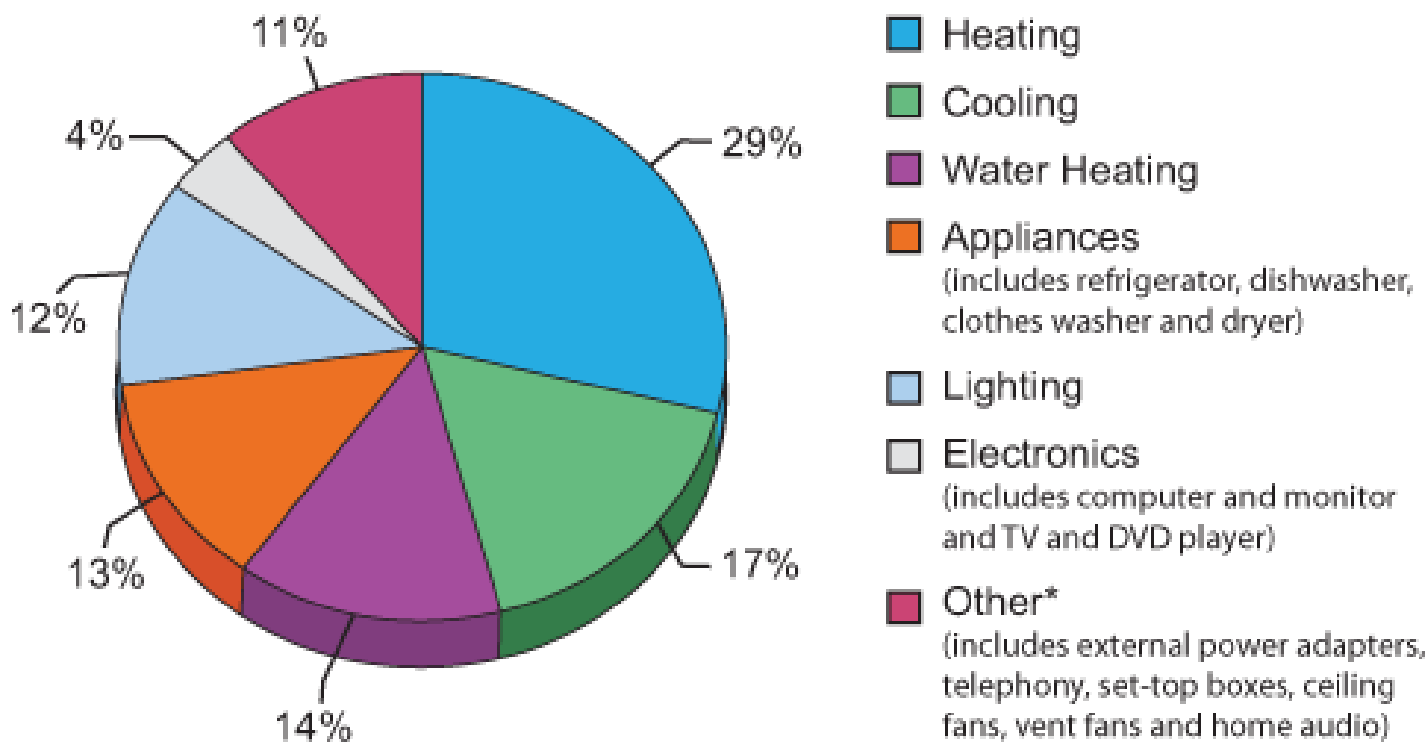
# Energy Efficiency - *Global Impact*

- ☼ Mass generation of electricity is the leading cause of air pollution in the US.
- ☼ Non renewable energy: The earth's remaining oil reserves will last us another 50-100 years, tops.
- ☼ Proven natural-gas reserves: 60 years;  
Coal: 200 years
- ☼ Renewable Energy: sun, wind, & movement of water are infinite

# Energy Efficiency at Home

## Where Does My Money Go?

Annual Energy Bill for a typical Single Family Home is approximately \$2,200.





# Energy Efficiency

## *Impact on your wallet...*

- ⚙ **Heating and Cooling** account for approx 46% (\$1012) of the average household's energy costs. Improving efficiency in heating and cooling can save families over **\$500** a year in utility costs.
- ⚙ **Appliances & Electronics** account for approx 28% percent of average household use, amounting to (\$616.) A 1970's refrigerator uses 75% more energy than current market brands; families save about **\$100** a year on electricity by switching to an ENERGY STAR refrigerator and washing machine.
- ⚙ **Lighting** An ENERGY STAR qualified compact fluorescent light bulb (CFL) will save about \$30 over its lifetime and pay for itself in about 6 months. It uses 75 percent less energy and lasts about 10 times longer than an incandescent bulb.

# Energy Efficiency

## *literal energy saving measures ...*

- ☼ Switch your electricity supply to green power
- ☼ Replace a regular incandescent light bulbs with compact fluorescent light bulbs
- ☼ Hit the energy saving switch
- ☼ Use rechargeable batteries for small appliances
- ☼ Move your thermostat down 2° in winter and up 2° in summer
- ☼ Turn off electronic devices you're not using
- ☼ Unplug electronics when you're not using them
- ☼ Carpool or ride the bus a few times per week

# ... in the kitchen

- ✿ Use a water filter at home instead of plastic bottles
- ✿ Recycle, recycle, recycle!!
- ✿ Consume more produce and less meat/processed food
- ✿ Cosco has affordable, organic bulk food items
- ✿ 365 Brand from Wholefoods, competitive pricing
- ✿ Use natural cat litter or newspaper instead of clay litter
- ✿ Eat out less often and cook at home
- ✿ Hit the energy saving switch
- ✿ Only run your dishwasher when there's a full load



# ... in the kitchen

- ☼ Cover all dishes of food you keep in the fridge. Humidity makes the fridge work harder.
- ☼ Clean out the back of the fridge twice a year
- ☼ A full fridge is an efficient fridge
- ☼ Glass and ceramic pans will cook food in ovens using 25 degrees less heat than metal pans
- ☼ Do the work, then preheat
- ☼ Open the oven door only when necessary (drops 25 degrees each time)

# ... In the bathroom

- ☼ Low flow faucets
- ☼ Purchase recycled paper products
- ☼ Turn off the water while brushing your teeth
- ☼ Showers, not baths

# Natural Cleaning

- ☼ Most of us over wash and dry
- ☼ Use cold water when possible
- ☼ Try using half the detergent
- ☼ Use a drying rack instead of a dryer when possible
- ☼ Clean the lint trap
- ☼ Check the outdoor dryer trap occasionally



# Eco-Friendly Ways to Clean the House

- ✿ Educate yourself about household waste options
- ✿ Replace toxic products (dispose properly)
- ✿ Disinfectants... staying away from bleach
- ✿ Reusable mops, sponges rags and other accessories
- ✿ Conserve water
- ✿ Clean indoor air quality with plants
- ✿ Use your senses!

# Natural Cleaning

Creating your own mix...

- ☼ White vinegar
- ☼ Water
- ☼ Cornstarch
- ☼ Lemon
- ☼ Club soda
- ☼ Ivory soap
- ☼ Peppermint oil or tea
- ☼ Baking soda
- ☼ Tea tree oil

# Products



- ✿ Shaking, rechargeable flashlight
- ✿ Energy star electronics (look for the label) : dvd players, cordless phones \$50, V-tech
- ✿ Preserve Toothbrush, biodegradable, recycled material: \$2 at Target
- ✿ All Target, eco-friendly products
- ✿ Bamboo furniture
- ✿ Affordable, stylish organic apparel @ target
- ✿ Reusable shopping bags (usually comes w/ a discount!)



# Resources

## On the web...

- ☼ [freecycle.org](http://freecycle.org) – your trash is someone else's treasure (and vice versa)
- ☼ [epa.gov/climatechange](http://epa.gov/climatechange) - facts, figures and data from the EPA
- ☼ [pse.com](http://pse.com) – Puget Sound Energy, tips and facts on energy efficiency
- ☼ [metrokc.gov/envIRON](http://metrokc.gov/envIRON) - King County, environmental info
- ☼ [earth911.org](http://earth911.org) – anything and everything directory for eco-friendly folks
- ☼ [41pounds.org](http://41pounds.org) – stop receiving junk mail and save trees
- ☼ [ecy.wa.gov](http://ecy.wa.gov) – Department of Ecology Washington State
- ☼ [energystar.gov](http://energystar.gov) – great homeowner trainings and online info
- ☼ [appropedia.org](http://appropedia.org) –collaborative solutions in sustainability, poverty reduction and international development

**“The world will not evolve past  
its current state of crisis by  
using the same thinking that  
created the situation.**

**– Albert Einstein**